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Heat Pumps 101

Wednesday, January 19
at 7 PM (Online)



Q A R I



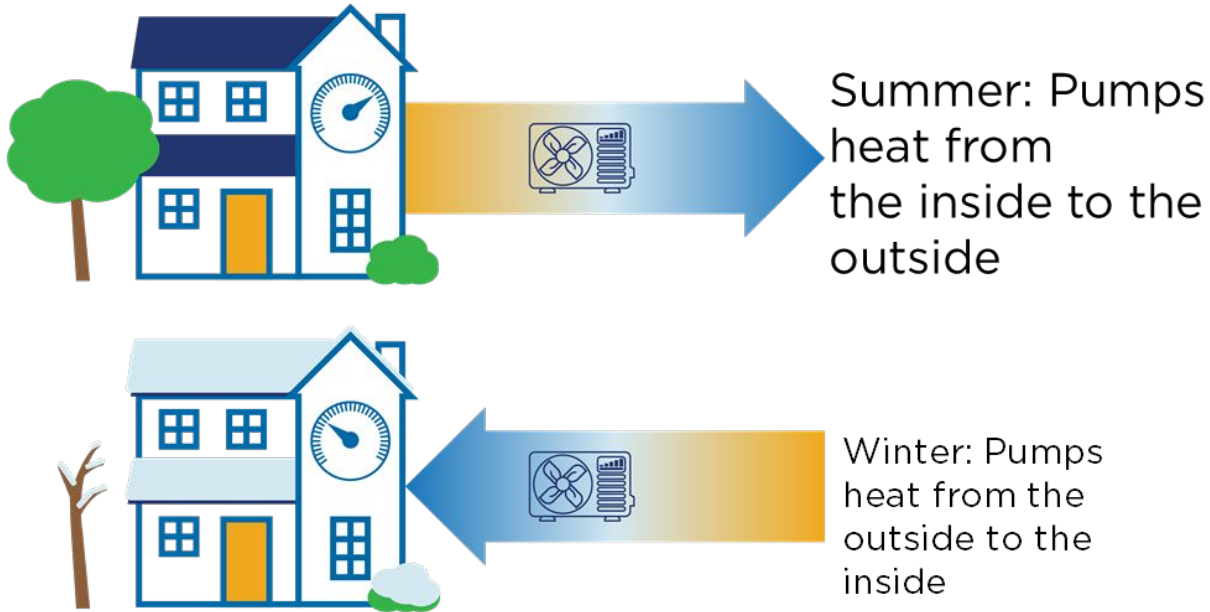
Live Interpretation

如需现场普通话翻译，请致电 (617)405-9744
For live Mandarin translation, call

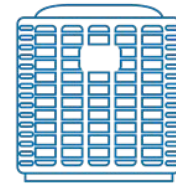
如需现场粤语翻译，请致电 (617)405-9745
For live Cantonese translation, call

请将您的 Zoom 和您的手机静音 / Please mute your Zoom & phone

What is a Heat Pump?



Same technology as:

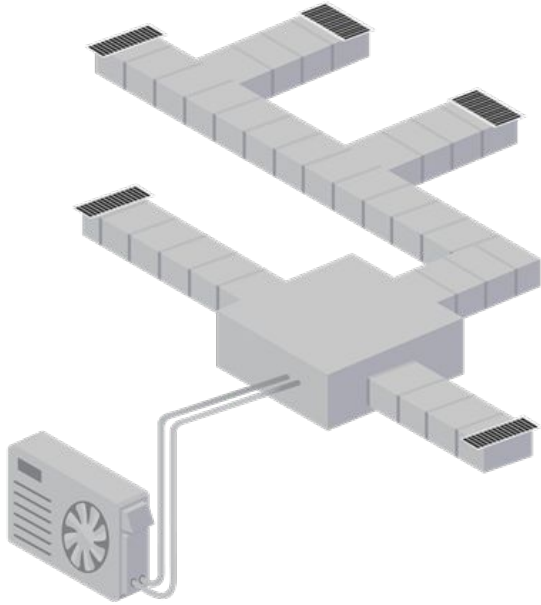


Air
Conditioner



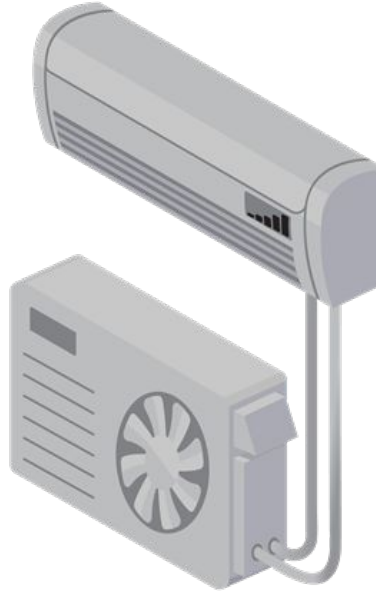
Refrigerator

Types of Heat Pumps



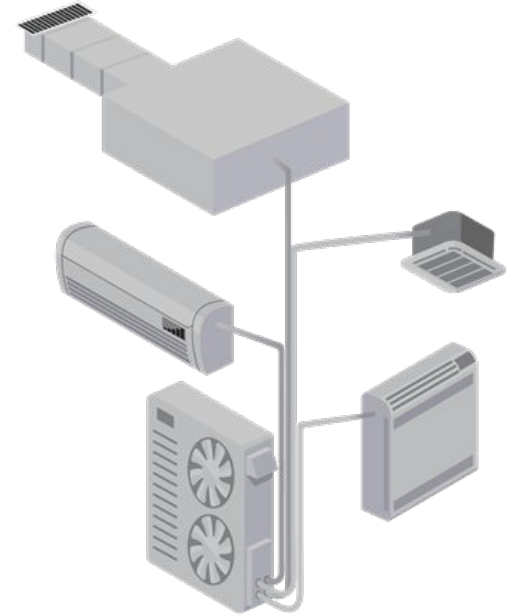
Ducted

Tie to existing duct work



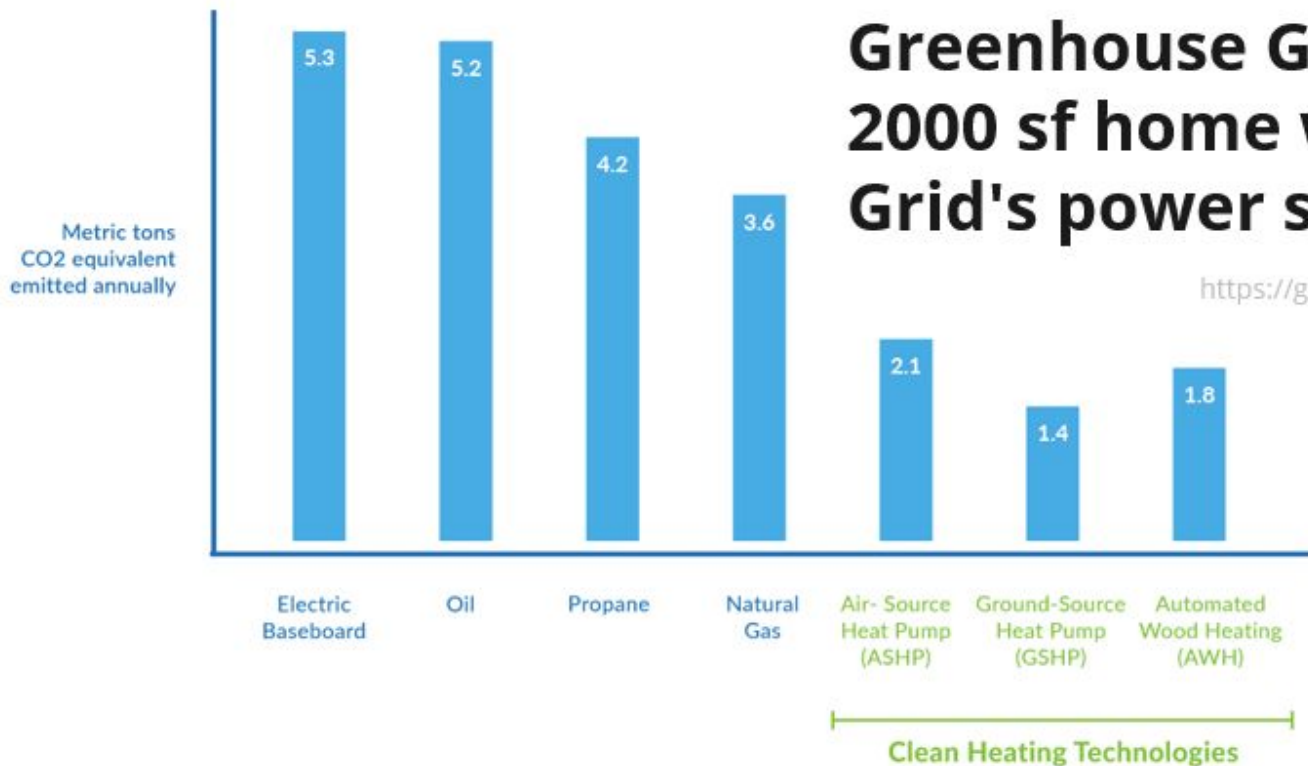
Ductless

for homes with existing forced water or limited space for duct work



Mixed Multi Zone

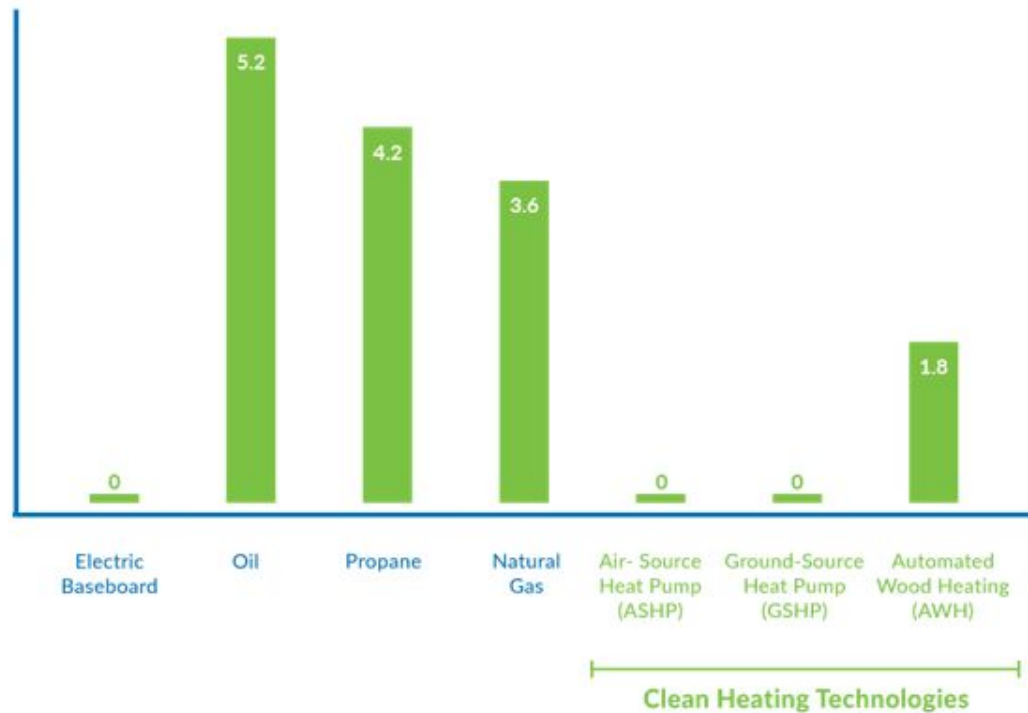
for homes with irregular framing or various room types



Emissions with 100% Wind, Solar, Hydro

Metric tons
CO2 equivalent
emitted annually

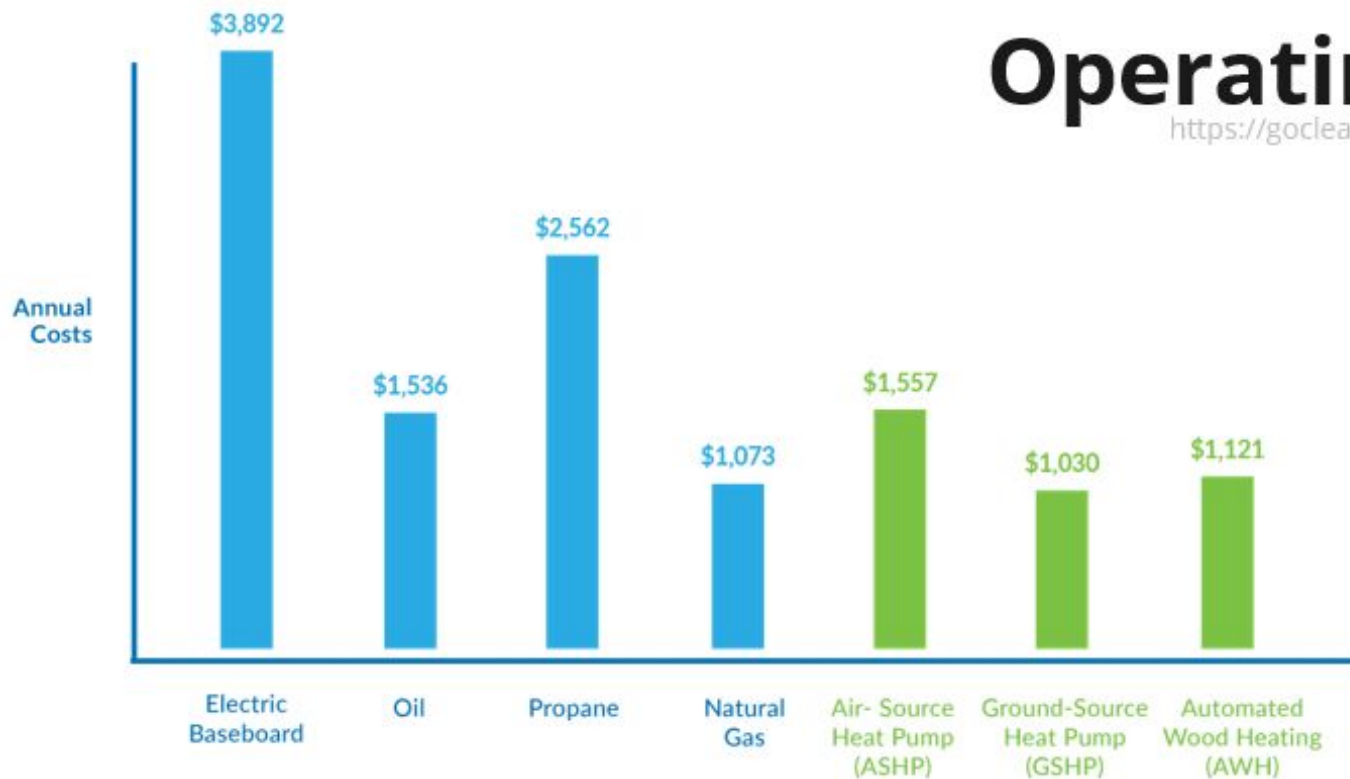
<https://quincycea.com/choice/>.



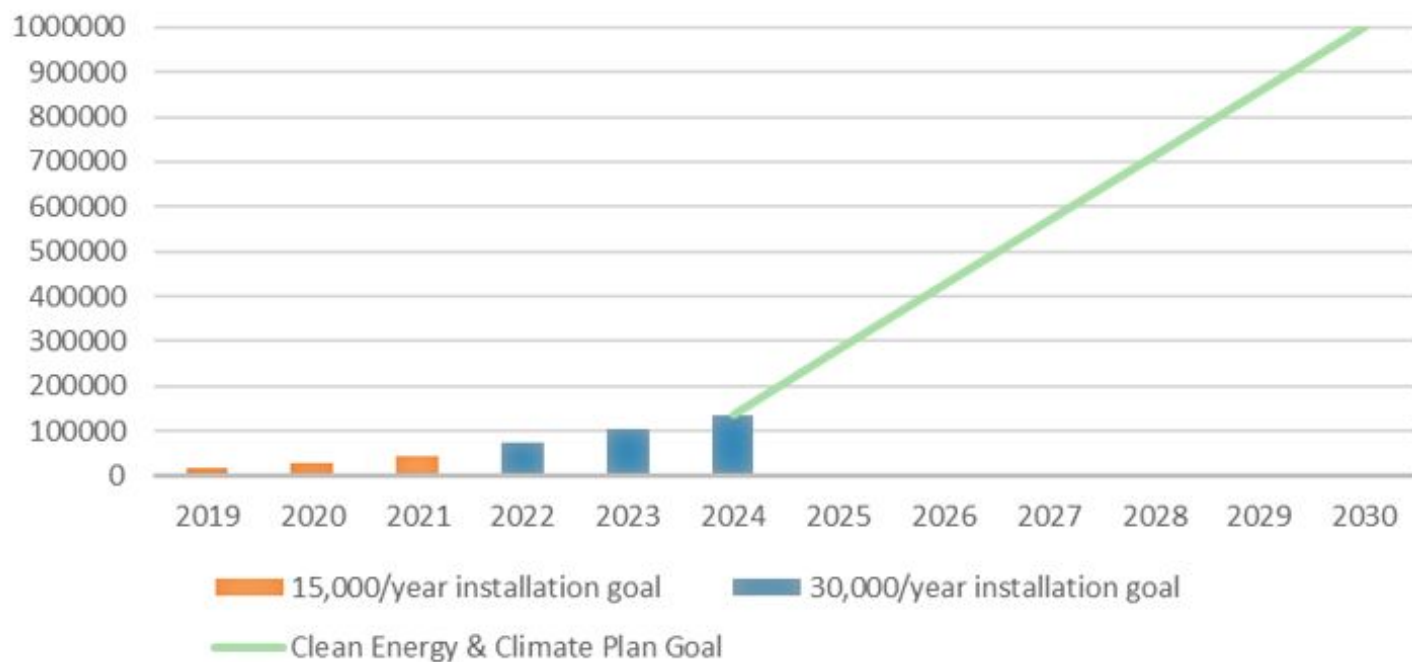
<https://goclean.masscec.com/benefits-savings/>

Operating Costs

<https://goclean.masscec.com/benefits-savings/>



CUMULATIVE MASS SAVE HEAT PUMP INSTALLATION GOALS



Look and feel of a ductless mini-split



- Indoor blower very quiet; outdoor component no louder than a central air unit.
- Consistent temperature, like an office building.
- Similar to forced hot air — but not the deep, “bone-soaking” heat of steam radiators.
- Refrigerant lines run outside of house between indoor and outdoor unit.

Heat pump installation costs

- Average cost of installing a 2.5-ton heat pump in Boston area in 2018-2019 was about **\$10,800** (prices have risen since).
- Average cost of a **whole-home heat pump system** retrofitted into an existing building in 2020 was **\$20,000**; for new construction, \$14,000.
- **Case study 1:** In Dec. 2020, a 40,000 BTU whole-home heat pump installed in a 1,500-square-foot Salem condo cost **\$12,700**.
- **Case study 2:** In Oct. 2021, QCAN members Jon and Gina installed two 1.8-ton mini-split heat pumps for **\$9,500** each before rebates.

Mass Save Proposed Incentives (Expanded)

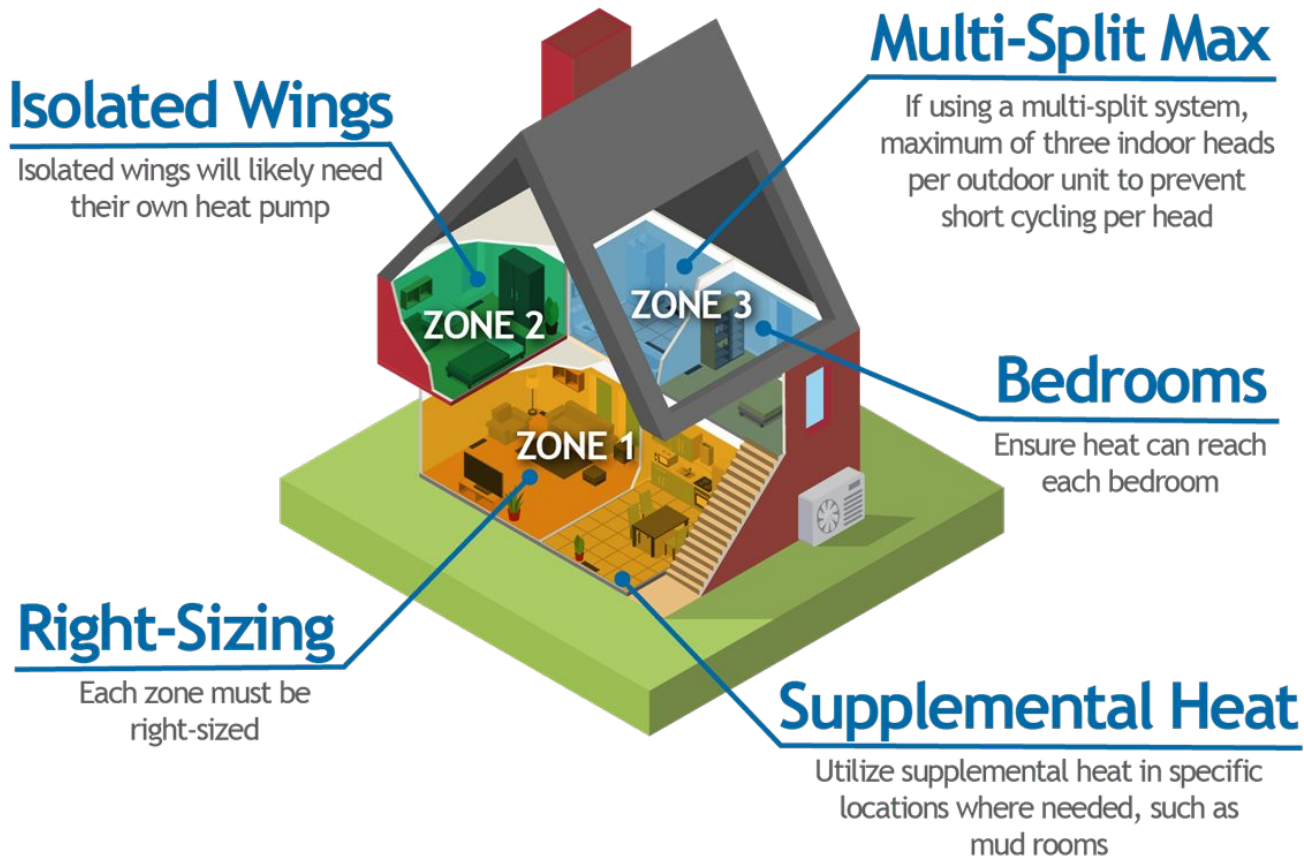
- Whole home: \$10,000
- Partial home: \$1,250 per ton, up to \$10,000
- Integrated controls: \$500 per indoor unit, up to \$1,500
- Possible incentive for displacement of gas heating

- Whole home ground-source heat pumps (geothermal): \$15,000

- Whole home air-to-water heat pumps: \$10,000

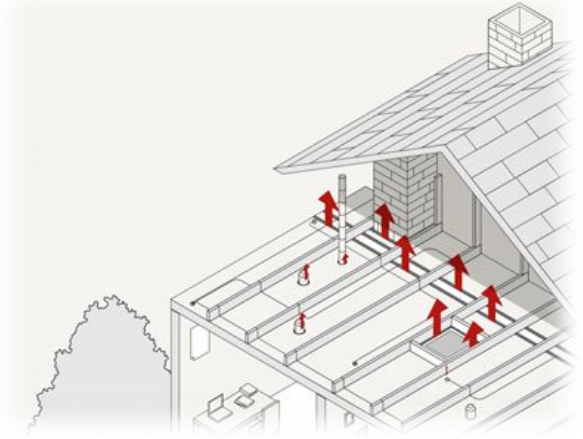
- Federal tax credit: up to \$300

Design & Installation Process



Efficiency Comes First

- Weatherize your home – free home energy assessment to reduce heating and cooling costs
- Improved comfort
- May enable a smaller, less expensive heat pump
- Reduces heat distribution challenges
- Can make ductless applications more viable



Questions?

Raise hand or type in chat

Youtube viewers: email info@QuincyCAN.org